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VIA HAND DELIVERY AND ELECTRONIC SUBMISSION

Docket Coordinator, Headquarters
U.S. Environmental Protection Agency
CERCLA Docket Office
1301 Constitution Avenue, NW
EPA West, Room 3334
Washington, DC 20004

Re: **Docket ID No. EPA-HQ-SFUND-2015-0139**
Proposed NPL Listing of the Anaconda Aluminum Co
Columbia Falls Reduction Plant, Columbia Falls, MT

Dear Sir or Madam:

On behalf of Columbia Falls Aluminum Company LLC ("CFAC"), I submit these comments for consideration with respect to the March 26, 2015 proposal by the United States Environmental Protection Agency ("EPA") to list the Anaconda Aluminum Co Columbia Falls Reduction Plant in Columbia Falls, Montana (the "Site") on the National Priorities List ("NPL").¹ CFAC is the current owner and operator of the Site and opposes NPL listing because, among other reasons, the score calculated for the site by EPA is inconsistent with the Hazard Ranking System ("HRS") in the National Contingency Plan,² EPA's guidance thereunder³ and the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).⁴ Essentially, EPA's support for Site NPL listing boils down to detections of cyanide below drinking water standards in a single drinking water well where neither cyanide nor any other contaminant has been detected in subsequent tests and the presence in surface water of a ubiquitous, naturally occurring substance (manganese) that EPA does not connect to industrial activity at the Site. Thus, EPA's decision to propose to list the site on the NPL is inconsistent

¹ National Priorities List, 80 Fed Reg. 15,972 (March 26, 2015).

² 40 C.F.R. § 300, App. A (1990).

³ EPA, EPA 540-R-95-026, HAZARD RANKING SYSTEM GUIDANCE MANUAL (1992).

⁴ 42 U.S.C. §9601 *et seq.* (1980).

with law, arbitrary, capricious and an abuse of discretion. Furthermore, listing the Site on the NPL now is not necessary because CFAC is ready, willing and able to assess the site.

For the reasons stated in this letter, CFAC respectfully requests that EPA withdraw the proposed Site NPL listing.

I. The EPA improperly interpreted the HRS , misapplied its own guidance and used inappropriate data when determining the Site Ground Water Migration Pathway and Surface Water Migration Pathway scores.

The EPA inappropriately assigned the Site a HRS score of 68.39⁵ when the correct score, had the EPA correctly interpreted the available data, should have been 20.75, below the 28.5 minimum score necessary to list the Site on the NPL. A red line developed by Roux Associates, Inc. (Roux) for CFAC of the worksheet for computing the HRS Site Score and supporting tables that appear in the HRS DR⁶ is annexed hereto as Exhibit A. The EPA incorrectly interpreted the HRS and applicable guidance and used inappropriate data in determining the score that it assigned to the groundwater migration pathway and to the surface water migration pathway.

A. The EPA incorrectly determined that actual contamination related to the Site existed in groundwater and thus arrived at an inflated Groundwater Migration Pathway score

- 1. The EPA ignored valid data showing that no cyanide from the Site was reaching drinking water wells when it determined that actual cyanide contamination existed in drinking water well CF-GW-OP-02.*

In the HRS DR, the EPA determined that actual contamination existed at residential drinking water well CF-GW-OP-02 because an October 2013 test of the well detected total cyanide at a level of 111 ug/L.⁷ Although below the Maximum Contaminant Level for public drinking water systems of 200 ug/L, this level did exceed the screening value for cyanide in drinking water of 9 ug/L that EPA uses to evaluate potential NPL sites under the HRS.⁸ Because of the actual contamination score based on this single detection, EPA determined that a Level I contamination occurred at the well and, based on a population of nine well users, assigned a Level I Concentration Factor Value of 90. Because EPA determined that Level 1 Contamination existed in the well, it assigned the maximum allowable Nearest Well Factor Value of 50. EPA then added these two values to arrive at a Targets category score of 140 and total pathway score for the Ground Water Migration Pathway of 93.33 out of 100.⁹

⁵ See generally EPA, HRS DOCUMENT RECORD (March 2015) (“HRS DR”).

⁶ HRS DR at pp. 2-6.

⁷ See HRS DR Sec. 3.3.1 at p. 60, referencing “Site Reassessment for Columbia Falls Aluminum Company Aluminum Smelter Facility Columbia Falls, Flathead County, Montana,” prepared by Weston Solutions, Inc. (April 2014) (hereinafter the “EPA April 2014 Report”). The report addressed field sampling activities conducted from September 23 – October 1, 2013 related to the CFAC site.

⁸ *Id.* See EPA, “Superfund Chemical Data Matrix (SCDM) Methodology” (June 2014) available at <http://epa.gov/superfund/sites/npl/hrsres/tools/scdm.htm>.

⁹ HS DR Sec. 3.3.1-3.3.2 at pp. 60-61.

EPA's Ground Water Migration Pathway Score is inconsistent with the HRS, arbitrary, capricious and abuse of discretion because there is no actual contamination of well CF-GW-OP-02 or, if there was any actual contamination in such well, it was not related to the Site. A subsequent test of well CF-GW-OP-02, along with 19 additional nearby wells, in April 2014 found no cyanide or any other contamination. EPA also sampled well CF-GW-OP-02 and nine other nearby wells in November 2014. These samples did not detect cyanide or any other contamination.¹⁰ These results indicate that cyanide is either not present in well CF-GW-OP-02 or that cyanide was present in well CF-GW-OP-02 but was from a source other than the Site. Therefore, EPA's finding of Level I contamination for the groundwater pathway due to actual contamination in well GF-GW-OP-02 is incorrect. Furthermore, after the second and third rounds of sampling did not detect cyanide, EPA determined not to take additional samples of CF-GW-OP-02 and any other area wells, indicating that EPA believes that the later sampling results are accurate and that no cyanide is present in well CF-GW-OP-02.¹¹

2. *Other anomalous cyanide results from the EPA April 2014 Report support the conclusion that EPA's October 2013 cyanide results for well CF-GW-OP-02 were incorrect*

Well CF-GW-OP-02 was not the only sample where EPA's cyanide detections in the EPA April 2014 Report results were anomalous and inconsistent with either other data or considerations that make that data highly suspect.

The EPA April 2014 Report indicates the presence of cyanide in three background surface water samples (SW-13, SW-14 and SW-16) collected from the Flathead River upstream of the Site. Cyanide was reportedly detected at estimated concentrations ranging from 106 ug/L to 120 ug/L; well in excess of the MDEQ acute aquatic toxicity water quality criteria of 22 ug/L.¹² It is extremely unlikely that the Flathead River, considered to be a relatively pristine river, would contain detectable concentrations of cyanide; and it is even less likely for the Flathead River to contain concentrations of cyanide far in excess of the acute aquatic toxicity water quality criteria. The more probable explanation for the anomalous data are laboratory errors or interferences resulting in false positive detections. The anomalous cyanide detections from the Flathead River are almost the same concentration as the cyanide detected in CF-GW-OP-02 during the 2013 sampling event (111 ug/L). The measurements were not repeated or confirmed in multiple subsequent sampling events. Thus, the same laboratory interferences that caused the anomalous cyanide detections in the Flathead River upstream of the Site are likely the cause of the anomalous detection of cyanide in CF-GW-OP-02.

¹⁰ See EXHIBIT B for the results of such sampling.

¹¹ See Richard Hanners, *County Health Board Wants More Answers on CFAC Site*, HUNGRY HORSE NEWS (April 22, 2015), http://www.flatheadnewsgroup.com/hungryhorsenews/county-health-board-wants-more-answers-on-cfac-site/article_2d30b9aa-e900-11e4-af66-375d7adc6311.html (last visited on May 20, 2015). See also Richard Hanners, *EPA Gathering Documents to List CFAC Smelter Site*, HUNGRY HORSE NEWS (February 15, 2015), http://www.flatheadnewsgroup.com/hungryhorsenews/epa-gathering-the-documents-to-list-cfac-smelter-site/article_a2c5532c-bd06-11e4-a8ea-1b67eb1fac33.html (last visited on May 20, 2015). "Parker also told Nicosia that no more well sampling was planned for residences near the closed CFAC plant."

¹² EPA April 2014 Report, App. E, Tbl. E37.

B. Excluding EPA's erroneous cyanide data for well CF-GW-OP-02, the correct score for the Groundwater Migration Pathway would have been 40.67.

In the absence of actual contamination of a drinking water well, the HRS requires that the potential for contamination to impact drinking water wells be evaluated.¹³ In its recalculation of the HRS Score summarized in Exhibit A, Roux Associates determined what the Groundwater Migration Pathway score would have been if EPA correctly found that actual contamination did not occur at well CF-GW-OP-02. Based upon the methodology specified in the HRS Section 3.3.1, the appropriate "Nearest Well" factor for the Site is "9". This is based upon the nearest drinking water well to a contamination source area at the Site being located at a distance between ½ mile and 1 mile.¹⁴

Based upon the methodology specified in the HRS Section 3.3.2.4, the appropriate "Population" factor for the Site is "52". This represents the summation of the distance-weighted population factors in HRS Table 3.12 for people located within 0 to ¼ mile, greater than ¼ mile to ½ mile; and greater than ½ mile to 1 mile. There are no people regularly using the water within 0 to ½ mile, so the population values for those two categories is "0" (HRS Table 3.12). From ½ mile to 1, it is estimated that 261 people reside within this area and that all individuals get their drinking water from water wells located within the area. This corresponds to a population value of "52".¹⁵

CFAC recognizes that there are additional wells located between a distance of 1 mile and the maximum ground water target distance of 4 miles. However, as stated by EPA "because it is not clearly been demonstrated that the alluvial aquifer is continuous from the facility to these wells, they have not been included in the site scoring."¹⁶

Based upon the above analysis, the appropriate "Targets" factor category value for the Site is "61", based upon the summation of the "Nearest Well" and "Population" factors describe above ("9" and "52", respectively). Use of the appropriate "Targets" factor category value to calculate the Ground Water Migration Pathway score yields a revised score of 40.67.

C. The EPA Incorrectly Determined that an Observed Release Occurred from the Site to Surface Water

The EPA April 2014 Report reported a dissolved manganese concentration of 31.4 ug/L in the Flathead River near the Site (CF-SW-07). The same report indicated that concentrations of manganese ranged from less than detection limits to a maximum of 2.2 ug/L in background surface water samples from the Flathead River. Therefore, EPA determined that an observed release of manganese had occurred in the Flathead River. The EPA attributed the manganese to the Site because manganese had been detected at several sources at the Site and none of these sources were determined to be contained.¹⁷

¹³ 40 CFR § 300, App. A, §3.1 (1990).

¹⁴ 40 CFR § 300, App. A, Tbl. 3-11 (1990).

¹⁵ See 40 CFR § 300, App A, Tbl. 3-12 (1990).

¹⁶ HRS DR Sec. 3.3 at p. 60.

¹⁷ See HRS DR Sec. 4.2.1.3 at pp. 68-70.

1. The EPA failed to distinguish manganese in surface water from ubiquitous, naturally occurring sources of manganese.

The EPA never attributed the manganese on the site to any Site industrial activity and EPA ignored its own data which indicated manganese is naturally occurring in soil in high concentrations on the Site. The EPA states in HRS DR:

Manganese is an analyte associated with Anaconda Aluminum Co Columbia Falls Reduction Plant sources listed in Section 2.2.1. No sources were found to be fully contained and the southern ponds are located adjacent to the surface water (Ref. 3, p.23; 6, p.5; 7, pp. 4, 5, 26; 19, p.17; Figure 2 of this HRS record). There are no other potential sources for these contaminants located either up gradient or in the immediate area (Ref. 39) (emphasis added).¹⁸

This statement by EPA is incorrect and ignores data that was developed by its contractor and reported in the EPA April 2014 Report and publicly available data regarding background manganese concentrations both on the site and in the area generally. Although accounting for background concentrations in surface water, the EPA does not account for the fact that Site manganese is likely background and naturally occurring. The HRS-DR identifies manganese as a contaminant associated with each percolation pond source. The reported concentrations of manganese in the seven source area sediment samples collected from the ponds ranged from 29.3 to 106 mg/kg.¹⁹ Although EPA characterizes these as “waste source samples”²⁰ or “solid-matrix waste source samples” these are really sediment samples from what EPA characterizes as “unlined”²¹ percolation ponds and thus of native soil.

However, these concentrations are well below background manganese concentrations both on the Site and in the surrounding area of Montana generally. The EPA does not consider that background concentrations of manganese were measured on Site with reported concentrations ranging from 1200 to 1570 mg/kg.²² Naturally occurring, background concentrations of manganese in Montana in the bulk and fine soil fractions average 508 and 477 mg/kg, respectively.²³ The EPA’s failure to link manganese to any industrial activity at the site and its failure to account for high concentrations of naturally occurring manganese in soil, notwithstanding its determination that surface and groundwater levels of manganese were three times background levels, is inconsistent with the policy of not using CERCLA authority to address naturally occurring substances.²⁴

¹⁸ HRS DR Sec. 4.2.1.3 at p. 70.

¹⁹ See HRS DR Sec. 2.2.1 at pp. 25-27, 30-32, 34-36, 38-39.

²⁰ *Id.*

²¹ See HRS DR Sec. 2.2.3 at p. 27, Sec. 2.2.3 at p. 32, Sec. 2.2.3 at p. 36, Sec. 2.2.3 at p. 40.

²² EPA April 2014 Report, App. E, Tbl. E-52.

²³ *Project Report – Background Concentrations of Inorganic Constituents in Montana Surface Soils*, Hydrometrics, Inc., Tbl. 4-1, p. 1 of 2 (September 2013). Annexed hereto as EXHIBIT C.

²⁴ See 42 U.S.C. §9604(a)(3).

Moreover, the manganese concentration of 31.4 ug/L is well within the range of concentrations commonly observed within the environment.²⁵ The EPA “Drinking Water Health Advisory for Manganese” cites published literature to report the following regarding manganese concentrations in surface water:

- Levels in freshwater typically range from 1 to 200 ug/L
- Dissolved manganese levels in surface water range from less than 11 to more than 51 ug/L).
- The USGS has indicated a median manganese level of 16 ug/L in surface waters, with 99th percentile concentrations of 400 to 800 ug/L.²⁶

The EPA further states with respect to the above data that “the higher levels in aerobic waters are usually associated with industrial pollution.”²⁷ However, the 31.4 ug/L in CF-SW-7 is clearly not among the higher levels, but rather indicative of the lower end of the range of reported concentrations.

2. *The EPA failed to follow its own guidance when selecting sampling locations in the Flathead River and thus should not have used such sampling results in compiling the Surface Water Migration Pathway Score.*

The EPA failed to follow its own guidance, was arbitrary, capricious and abused its discretion when it compared manganese in a surface water sample of a backwater wetlands area of the Flathead River with background samples taken from the main stem of the Flathead River. With regard to obtaining appropriate background samples from surface waters for purposes of comparing to the probable point of entry of a hazardous substance, the Hazard Ranking System Guidance Manual states for non-tidal streams and rivers, such as the Flathead River

Where possible, background and release samples should be collected from the same general part of the surface water body (e.g. a background sample taken near one bank generally should not be compared with a release sample taken from the center of the main channel.)²⁸

The location of the sample in which EPA found manganese at a level three times back ground concentrations (CF-SW-7) is within a backwater wetland area adjacent to the Site, not within the main channel of the Flathead River where the background samples were collected. As such, the samples are not comparable because they are potentially subject to different environmental conditions. The location of CF-SW-7 is much more subject to influence of natural inputs of dissolved manganese associated with naturally reducing conditions that occur in wetlands, as opposed to the samples within the main channel of the river where mixing, dilution and aeration will quickly reduce the concentration of any dissolved manganese in surface water.

²⁵ EPA, EPA-822-R-04-003, DRINKING WATER HEALTH ADVISORY FOR MANGANESE (2004) at p. 4. Annexed hereto as EXHIBIT D.

²⁶ *Id.*

²⁷ *Id.*

²⁸ HAZARD RANKING SYSTEM GUIDANCE MANUAL, Sec. 5.2, p. 72.

D. Correctly Accounting for Naturally Occurring Manganese and Excluding EPA's Erroneous Data Regarding an Observed Release to Surface Water, the Correct Surface Water Migration Pathway Score Would Have Been 8.3.

As required by the HRS, Roux calculated the revised Surface Water Migration Pathway Score based upon their evaluation of the Groundwater to Surface Water Migration pathway component score, including the "Human Food Chain Threat" and "Environmental Threat" categories.²⁹ The rationale for this revised score is presented below in a sequence that corresponds to the line numbers and Factor Categories / Factors included in Table 4-25.³⁰ These values are also contained in the revised Table 4.25 in Exhibit B.

Line 1 – Observed Release. For the reasons stated above in Section C, EPA incorrectly determined that an observed release occurred from the Site to Surface Water. In the absence of an observed release this factor was assigned a value of "0" as specified in HRS Section 4.2.2.1.1.

Line 2a – Containment. The potential sources of contamination at the Site are unlined. Therefore, this factor was assigned the maximum value of "10" as specified in HRS Section 4.2.2.1.2, HRS Section 3.1.2 and HRS Section 3.1.2.1.

Line 2b - Net Precipitation. Based upon the Site location in the northwest portion of Montana, this factor was assigned a value of "3" as specified in HRS Section 4.2.2.1.2, HRS Section 3.1.2 and HRS Section 3.1.2.2.

Line 2c – Depth to Aquifer. Based upon a depth to groundwater of less than 25 feet beneath the South Percolation Ponds, this factor was assigned the maximum value of "5" as specified in HRS Section 4.2.2.1.2, HRS Section 3.1.2 and HRS Section 3.1.2.3.

Line 2d – Travel Time. Based upon the depth to groundwater potentially being less than 10 feet beneath the South Percolation Ponds, this factor was assigned the maximum value of "35" as specified in HRS Section 4.2.2.1.2, HRS Section 3.1.2 and HRS Section 3.1.2.4.

Line 2e – Potential to Release. This factor was calculated to be "430" as specified in HRS Section 4.2.2.1.2 and HRS Section 3.1.2.5.

Line 3 – Likelihood of Release. Because there was no observed release, this factor was assigned the Potential to Release value of "430" as specified in HRS Section 4.2.2.1.3.

Line 4 thru Line 11. No changes from EPA version of Table 4-25.

Line 12 – Likelihood of Release. This factor was assigned the value of "430" (the same value as Line 3) as specified in HRS Section 4.2.3.1.

Line 13 thru Line 15. No changes from EPA version of Table 4-25.

²⁹ 40 CFR § 300 App. A, §4.2.1.5 (1990).

³⁰ *Id.* See also HRS DR at pp. 4-6.

Line 16 – Food Chain Individual. In the absence of an observed release, this factor was assigned the value of “0” as specified in HRS Section 4.2.3.3.1 and HRS Section 4.1.3.3.1. This determination was made considering that the Flathead River is considered a “large river”, as characterized EPA (HRS-DR Section 4.2.2.1, p. 67), and the assigned dilution weight specified in HRS Table 4-13.

Line 17a – Level 1 Concentrations. No change from EPA version of Table 4-25.

Line 17b – Level II Concentrations. In the absence of an observed release there are no Level II concentrations, therefore this factor was assigned the value of “0” as specified in HRS Section 4.2.3.3.2.2 and HRS Section 4.1.3.3.2.2.

Line 17c – Potential Human Food Chain Contamination. This factor value was determined to be 1.5×10^{-7} following the methodology specified in HRS Section 4.2.3.3.2.3, HRS Section 4.1.3.3.2.3 and HRS Section 4.2.2.3.1. In making this determination, the annual production for fishery was assumed to be 0 to 100 pounds per year, and Human Food Chain Population Value of 0.03 was assigned for the fishery (HRS Table 4-18), consistent to the approach used by EPA.³¹

Line 17d – Population. This factor value was determined to be 1.5×10^{-7} following the methodology specified in HRS Section 4.2.3.3.2.4.

Line 18 – Targets. This factor value was determined to be 1.5×10^{-7} following the methodology specified in HRS Section 4.2.3.3.3.

Line 19 – Human Food Chain Threat Score. This factor value was determined to be 2.5×10^{-7} following the methodology specified in HRS Section 4.2.3.4

Line 20 – Likelihood of Release. This factor was assigned the value of “430” (the same value as Line 3) as specified in HRS Section 4.2.4.1.

Line 21 thru Line 24a. No changes from EPA version of Table 4-25.

Line 24b – Level II Concentrations. In the absence of an observed release there are no Level II concentrations, therefore this factor was assigned the value of “0” following the methodology specified in HRS Section 4.2.4.3.1.2 and HRS Section 4.1.4.3.1.2.

Line 24c – Potential Contamination. This factor was assigned a value “5” following the methodology specified in HRS Section 4.2.4.3.1.3 and HRS Section 4.1.4.3.1.3. In making this determination, the sensitive environments included in the evaluation included critical habitat for Bull Trout (Federally Threatened species) and Wetlands between 1 and 2 miles in length adjacent to site, consistent with the approach used by EPA.³²

Line 24d – Sensitive Environments. The factor was assigned a value of “5” following the methodology specified in HRS Section 4.2.1.5, Table 4-25.

³¹ HRS DR Sec. 4.2.3.3.2.2 at p. 73.

³² HRS DR Sec. 4.2.4.3.1 at p. 77.

Line 25 – Targets. This factor was assigned a value “5” following the methodology specified in HRS Section 4.2.4.3.1.4.

Line 26 – Environmental Threat Score. This score was calculated to be “8.3” following the methodology specified in Section 4.2.4.4.

Line 27 – Watershed Score. This score was calculated to be “8.3” following the methodology specified in Section 4.2.5.

Line 28 – Ground Water to Surface Water Migration Component Score. This score was calculate to be “8.3” following methodology specified in 4.2.6.

II. Listing the Site on the NPL is Unnecessary Because CFAC has Repeatedly Expressed its Willingness to Assess Site Conditions

“The NPL is intended primarily to guide the EPA in determining which sites warrant further investigation.”³³ CFAC, the Site owner and operator, agrees that the Site warrants further investigation, even if it does not qualify for NPL listing under the HRS, and has agreed to undertake such investigation. CFAC has sought to engage EPA in a discussion of an Administrative Order on Consent (“AOC”) to govern such an investigation. Since November 2014, CFAC’s counsel has communicated its interest to EPA counsel, in both telephone calls and emails, in engaging in such a discussion.

CFAC has taken steps to assess the Site, including hiring a qualified environmental consultant, Roux, to develop a Remedial Investigation/Feasibility Study Work Plan (RI/FS Work Plan). Development of an RI/FS Work Plan is a first step toward performing a site assessment consistent with the National Contingency Plan. Given that the “NPL is intended primarily to guide EPA in determining which sites warrant further investigation” and CFAC, a private party, is ready, willing and able to perform such an assessment, listing the site on the NPL now would serve no useful purpose.

Sincerely,

/S/ Andrew D. Otis

Andrew D. Otis

³³ EPA, “National Priorities List” available at <http://www.epa.gov/superfund/sites/npl/index.htm> (last visited May 29, 2015).